AMENDED CLAIMS

1. (currently amended) An ultra-deep hydrodesulfurization process for reducing the content of sulfur compounds comprising alkylated benzothiophenes in a hydrocarbon feedstock having an initial boiling point of not less than about 100°C and a 95% boiling point of about 450°C or less and a sulfur content between about 150 ppm and about 500 ppm to a sulfur content of less than about 50 ppm, comprising contacting said feedstock with a catalyst comprising a Group VIB metal component, a Group VIII metal component selected from the group consisting of nickel, cobalt and iron, and an S-containing organic additive comprising a mercaptocarboxylic acid represented by the general formula HS-R1-COOR, wherein R1 stands for a divalent hydrocarbon group with 1 to about 10 carbon atoms and R stands for a hydrogen atom, an alkali metal, an alkaline earth metal, ammonium, or a linear or branched alkyl group having 1 to about 10 carbon atoms, at a temperature from about 200 to about 450°C, a hydrogen partial pressure from about 5 to about 200 bar, a liquid hourly space velocity from about 0.1 to about 10 vol./vol.h and an H_2/oil ratio from about 50 to about 2000 Nl/l, thereby decomposing said sulfur compounds.

2. (canceled)

3. (canceled)

4. (canceled)

5. (canceled)

6. (canceled)

7. (original) The process of claim 1, wherein said feedstock is contacted with said catalyst at a temperature from about 280 to about 430°C.

8. (original) The process of claim 1, wherein said hydrogen partial pressure is from about 10 to about 100 bar.

9. (original) The process of claim 1, wherein said hydrogen partial pressure is from about 15 to about 60 bar.

10. (original) The process of claim 1, wherein said liquid hourly space velocity is from about 0.5 to about 4 vol./vol.h.

11. (original) The process of claim 1, wherein said H_2/oil ratio is from about 80 to about 1000 Nl/l.

12. (currently amended) An ultra-deep hydrodesulfurization process for reducing the content of sulfur compounds comprising alkylated benzothiophenes in a hydrocarbon feedstock having an initial boiling point of not less than about 100°C and a 95% boiling point of about 450°C or less and a sulfur content between about 150 ppm and about 500 ppm to a sulfur content of less than about 50 ppm, comprising contacting said feedstock with a catalyst at a temperature from about 200 to about 450°C, a hydrogen partial pressure from about 5 to about 200 bar, a liquid hourly space velocity from about 0.1 to about 10 vol./vol.h and an H_2/oil ratio from about 50 to about 2000 Nl/l, said catalyst comprising a Group VIB metal component, a Group VIII metal component selected from the group consisting of nickel, cobalt and iron, and an S-containing organic additive comprising a mercaptocarboxylic acid represented by the general formula HS-R1-COOR, wherein R1 stands for a divalent hydrocarbon group with 1 to about 10 carbon atoms and R stands for a hydrogen atom, an alkali metal, an alkaline earth metal, ammonium, or a linear or branched alkyl group having 1 to about 10 carbon atoms, said catalyst being subjected to a sulfidation step and/or activation step before contact with said feedstock, thereby decomposing said sulfur compounds.

13. (canceled)

14. (canceled)

15. (canceled)

16. (canceled)

17. (canceled)

18. (original) The process of claim 12, wherein said feedstock is contacted with said catalyst at a temperature from about 280 to about 430°C.

19. (original) The process of claim 12, wherein said hydrogen partial pressure is from about 10 to about 100 bar.

20. (original) The process of claim 12, wherein said hydrogen partial pressure is from about 15 to about 60 bar.

21. (original) The process of claim 12, wherein said liquid hourly space velocity is from about 0.5 to about 4 vol./vol.h.

22. (original) The process of claim 12, wherein said H_2/oil ratio is from about 80 to about 1000 Nl/l.

23. (currently amended) A two-step ultra-deep desulfurization process for converting a starting feedstock having an initial boiling point of not less than about 100°C and a 95% boiling point of about 450°C or less and having a sulfur content comprising alkylated benzothiophenes of above about 0.1 wt.% and not greater than about 2 wt.% into a product having a sulfur content of about 50 ppm or less, wherein the process comprises contacting said feedstock with a first catalyst followed by contact with a second catalyst, both catalysts comprising a Group VIB metal component and a Group VIII metal component selected from the group consisting of nickel, cobalt and iron, with at least said second catalyst additionally comprising an S-containing organic additive comprising a mercaptocarboxylic acid represented by the general formula HS-R1-COOR, wherein R1 stands for a divalent hydrocarbon group with 1 to about 10 carbon atoms and R stands for a

hydrogen atom, an alkali metal, an alkaline earth metal, ammonium, or a linear or branched alkyl group having 1 to about 10 carbon atoms, the conditions for said contact with both catalysts being the same or different and comprising a temperature from about 200 to about 450°C, a hydrogen partial pressure from about 5 to about 200 bar, a liquid hourly space velocity from about 0.1 to about 10 vol./vol.h and an H_2/oil ratio from about 50 to about 2000 Nl/l, the effluent from contact with said first catalyst having a sulfur content of less than about 500 ppm, and the product after contact with the second catalyst having a sulfur content of less than about 50 ppm.

24. (original) The process of claim 23, wherein the effluent following contact with said first catalyst is contacted with said second catalyst after fractionation or intermediate phase separation.

25. (original) The process of claim 23 wherein the first catalyst comprises molybdenum as Group VIB metal component and cobalt and/or nickel as Group VIII metal component, while the second catalyst comprises molybdenum as Group VIB metal component and nickel as Group VIII metal component.

26. (currently amended) A two-step ultra-deep hydrodesulfurization process for converting a starting feedstock having an initial boiling point of not less than about 100°C and a 95% boiling point of about 450°C or less and having a sulfur content comprising alkylated benzothiophenes of above about 0.1 wt.% and not greater than about 2 wt.% into a product having a sulfur content of about 50 ppm or less, wherein the process comprises contacting said feedstock with a first catalyst followed by contact with a second catalyst, the conditions for said contact with both catalysts being the same or different and comprising a temperature from about 200 to about 450°C, a hydrogen partial pressure from about 5 to about 200 bar, a liquid hourly space velocity from about 0.1 to about 10 vol./vol.h and an H_2/oil ratio from about 50 to about 2000 Nl/l, the effluent from contact with said first catalyst having a sulfur content of less than about 500 ppm, and the product after contact with the second catalyst having a sulfur content of less than about 50 ppm, both of said catalysts comprising a Group VIB metal component and a Group VIII metal component selected from the group

consisting of nickel, cobalt and iron, with at least said second catalyst additionally comprising an S-containing organic additive comprising a mercaptocarboxylic acid represented by the general formula HS-R1-COOR, wherein R1 stands for a divalent hydrocarbon group with 1 to about 10 carbon atoms and R stands for a hydrogen atom, an alkali metal, an alkaline earth metal, ammonium, or a linear or branched alkyl group having 1 to about 10 carbon atoms, said first catalyst and/or said second catalyst being subjected to a sulfidation step and/or activation step before contact, respectively, with said feedstock or contact with the effluent from contact with said first catalyst.

27. (original) The process of claim 26, wherein the effluent following contact with said first catalyst is contacted with said second catalyst after fractionation or intermediate phase separation.

28. (original) The process of claim 26 wherein the first catalyst comprises molybdenum as Group VIB metal component and cobalt and/or nickel as Group VIII metal component, while the second catalyst comprises molybdenum as Group VIB metal component and nickel as Group VIII metal component.